

Computational power of one-way turing machines with sublogarithmic memory restrictions

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Abstract

This paper considers the well-known Turing machine model, the nondeterministic real-time Turing machine. The author proves the existence of nonregular complexity classes of languages that can be recognized by nondeterministic one-way Turing machines with sublogarithmic memory restrictions. And these complexity classes form a strict hierarchy. The author defines a special language family and shows its properties to prove that hierarchy. © 2014 Allerton Press, Inc.

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Keywords

memory restrictions, nondeterministic Turing machine, one-way Turing machine